

**Dr. Duke's Phytochemical and Ethnobotanical Database**

**Chemicals Found in Plantago ovata**

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	(+)-BOSCHNIAKINE	Seed	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	(+)-BOSCHNIAKINIC-ACID	Seed	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	(-)-L-ASPARAGINE	Seed	--	--		
0	4-O-METHYL-GLUCURONIC-ACID	Plant	--	--		
0	9-OXO-OCTADEC-CIS-12-ENOIC-ACID	Seed Oil	--	--		
0	ALDOBIURONIC-ACID	Seed	--	--		
10	ALPHA-AMYRIN	Seed	--	--		
0	ALSOBIURONIC-ACID	Seed	--	--		
0	ANTE-ISO-OCTADECANE	Seed Coat	--	--		
0	ANTE-ISOHEXADECANE	Seed Coat	--	--		
0	ARABINOXYLANS	Seed	170000	255000		Wichtl, M. 1984. Teedrogen. Ein Handbuch fur Apotheker und Arzte. Wissenschaftliche Verlagsgesellschaft. mbH Stuttgart. 393 pp.
20	AUCUBIN	Seed	--	--		Wichtl, M. 1984. Teedrogen. Ein Handbuch fur Apotheker und Arzte. Wissenschaftliche Verlagsgesellschaft. mbH Stuttgart. 393 pp.
0	AUCUBIN-GLUCOSIDE	Seed	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
1	BEHENIC-ACID	Seed	1300	1300	-0.5564308287176762	
9	BETA-AMYRIN	Seed	--	--		
47	BETA-SITOSTEROL	Seed	--	--		
2	CAMPESTEROL	Seed	--	--		
0	D-GALACTURONIC-ACID	Seed	--	--		Wichtl, M. 1984. Teedrogen. Ein Handbuch fur Apotheker und Arzte. Wissenschaftliche Verlagsgesellschaft. mbH Stuttgart. 393 pp.
0	D-GALACTURONIC-ACID	Plant	--	--		
0	D-XYLOSE	Plant	--	--		
0	D-XYLOSE	Seed	--	--		Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
0	DL-ALANINE	Seed	--	--		
0	DL-NORLEUCINE	Seed	--	--		
0	DL-VALINE	Plant	--	--		
0	DL-VALINE	Seed	--	--		
0	FAT	Seed	50000	51000	-1.1292561293337569	
0	FIXED-OIL	Endosperm	--	88000		
8	FRUCTOSE	Seed	--	--		
1	GALACTOSE	Seed	--	--		
7	GLUCOSE	Seed	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
8	GLUTAMIC-ACID	Seed	--	--		
12	GLYCINE	Seed	--	--		
0	INDICAINE	Seed	--	--		
0	INDICAININE	Seed	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	INDICAMINE	Plant	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	ISODOTRIACONTANE	Seed Coat	--	--		
0	ISOHENTRIACONTANE	Seed Coat	--	--		
0	ISOHEPTADECANE	Seed Coat	--	--		
0	ISOHEXADECANE	Seed Coat	--	--		
0	ISONONACOSANE	Seed Coat	--	--		
0	ISOOCTADECANE	Seed Coat	--	--		
0	ISOPENTACOSANE	Seed Coat	--	--		
0	ISORICINOLEIC-ACID	Seed Oil	--	--		
0	ISOTRITRIACONTANE	Seed Coat	--	--		
0	L-ARABINOSE	Seed	--	140000	1	Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
0	L-ASPARAGINE	Seed	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	L-CYSTINE	Seed	--	--		
0	L-LYSINE	Seed	--	--		
0	L-RHAMNOSE	Seed	--	--		Wichtl, M. 1984. Teedrogen. Ein Handbuch für Apotheker und Ärzte. Wissenschaftliche Verlagsgesellschaft. mbH Stuttgart. 393 pp.
1	LIGNOCERIC-ACID	Seed	400	400	-0.5742301369933868	Morton, J.F., Major Medicinal Plants. 1977. Atlas of Medicinal Plants of Middle America. Bahamas to Yucatan. 1981.
27	LINOLEIC-ACID	Seed	13000	24375	-0.7089861957266169	
27	LINOLEIC-ACID	Se	13000	24375		
27	LINOLEIC-ACID	Seed Coat	--	--		
27	LINOLEIC-ACID	Seed Oil	--	534000	0.5619112798571412	
0	LINOLENIC-ACID	Seed	511	1500	-0.5536758709883314	
0	LINOLENIC-ACID	Seed Coat	--	--		
78	LUTEOLIN	Leaf	--	--		
3	MUCILAGE	Seed	100000	300000	0.6463360496314006	
3	MUCILAGE	Seed Coat	--	--		
6	MYRISTIC-ACID	Seed Coat	--	--		
6	MYRISTIC-ACID	Seed	1300	1300	-0.2789850933065345	
0	N-DOCOSANE	Seed Coat	--	--		
0	N-DOTRIACONTANE	Seed Coat	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	N-EICOSANE	Seed Coat	--	--		
0	N-HENEICOSANE	Seed Coat	--	--		
3	N-HENTRIACONTANE	Seed Coat	--	--		
0	N-HEPTACOSANE	Seed Coat	--	--		
0	N-HEPTADECANE	Seed Coat	--	--		
2	N-HEXACOSANE	Seed Coat	--	--		
0	N-HEXADECANE	Seed Coat	--	--		
1	N-NONACOSANE	Seed Coat	--	--		
0	N-NONADECANE	Seed Coat	--	--		
0	N-OCTADECANE	Seed Coat	--	--		
0	N-PENTACOSANE	Seed Coat	--	--		
0	N-TETRACOSANE	Seed Coat	--	--		
0	N-TRIACONTANE	Seed Coat	--	--		
0	N-TRICOSANE	Seed Coat	--	--		
0	N-TRITRIACONTANE	Seed Coat	--	--		
18	OLEIC-ACID	Seed Oil	--	254000	-0.35106622403308685	
18	OLEIC-ACID	Seed	8000	19470	-0.8190453796719163	
18	OLEIC-ACID	Seed Coat	--	--		
13	PALMITIC-ACID	Seed Coat	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
13	PALMITIC-ACID	Seed	1300	5500	-0.5861182036028835	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
2	PHYTOSTEROLS	Seed	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	PLANTEOSE	Seed	--	--		
0	PLATAGONINE	Seed	--	--		
0	RHAMNOSE	Seed	--	70000		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
8	STEARIC-ACID	Seed	1300	3450	-0.4905367554394443	Morton, J.F., Major Medicinal Plants. 1977. Atlas of Medicinal Plants of Middle America. Bahamas to Yucatan. 1981.
8	STEARIC-ACID	Seed Coat	--	--		
0	STEROL	Plant	--	--		
12	STIGMASTEROL	Seed	--	--		
14	SUCROSE	Plant	--	--		
14	SUCROSE	Seed	--	--		
35	TANNIN	Plant	--	--		
0	TANNINS	Plant	--	--		Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
8	TYROSINE	Seed	--	--		

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0	URONIC-ACID	Seed	--	--		
3	VALINE	Plant	--	--		
3	XYLOSE	Seed	460000	800000	1	Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.